

3(4, 6)	PHASE I BOOK EXPLOITATION	509/2256
	Vsesoyuzny nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki	
	Prikladnaya geofizika; sbornik statey, vyp. 22 (Applied Geophysics; Collection of Articles, Nr 22) Moscow, Gosoptekhnizdat, 1959. 217 p. 3,000 copies printed.	
	Ed.: M.K. Polshkov; Izd.: M.M. Kus'mina; Tech. Ed.: A.S. Polosina.	
	PURPOSE: This collection of articles is intended for geophysicists in both industrial and research organizations.	
	COVERAGE: The book contains articles on improved methods for interpreting seismic-refraction data obtained by means of refracted and reflected waves. A number of articles deal with the evaluation of gravity anomalies. Individual articles discuss a theoretical model of a gravitational field into its components by means of a computer, gamma radiation in boreholes, density of rocks of the Precambrian basement in the eastern part of the Russian Platform, and the use of templates in micro-logging. There are 74 figures and 35 tables. There are 95 references: 89 Soviet and 6 English.	
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	AVAILABILITY: Library of Congress	

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15

SOV/132-59-7-8/17

3(6)

AUTHOR: Stupak, N.K.

TITLE: On the New Method of Representing Magnetic and Gravitation Anomalies

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 7, pp 31-34 (USSR)

ABSTRACT: The prospecting geophysical survey is concerned with the solution of the problem of determining the form, the dimension and the depth of occurrence of geological bodies which cause the anomalies of gravitation and geomagnetic fields on the Earth's surface. The correlation between the distribution of field elements, the form, the physical characteristics and the position of the disturbing bodies are the physical-mathematical basis for the solution of this problem. As the magnetic and gravitation fields are completely determined by the intensity vectors, this correlation can be expressed as follows:

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$$T = f_1(x, y, z)$$

$$\text{and } G = F_2(x, y, z)$$

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On the New Method of Representing Magnetic and Gravitation Anomalies

where T is the intensity vector of the magnetic field and G - of the gravitation field, x, y, z being geodetic coordinates of the survey points. The aspect of these functions is determined by the form of the body and by laws of distribution of density and intensity of the magnetization of the body. Coordinates of the disturbing body and its dimensions enter in these functions as parameters. Thus the problem of the interpretation of anomalies comes to the determination of the aspect of the above mentioned functions and to the calculation of parameters of the disturbing body. To simplify these complicated calculations, the author proposed a new method of solving the problem of interpretation of magnetic anomalies exposed in his thesis published in 1955. In this article the author describes in detail 2 cases of representing the field

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On the New Method of Representing Magnetic and Gravitation Anomalies

illustrated on two examples of gravitation anomalies.
There are 2 sets of diagrams.

ASSOCIATION: Dnepropetrovskiy gornyy institut (Dnepropetrovsk Mining
Institute)

Card 3/3

STUPAK, N.K.; TYAPKIN, K.F.

Interpretation of local magnetic anomalies produced by sheetlike
bodies. Trudy NIZMIR no.16:72-81 '60. (MIRA 14:3)
(Magnetic anomalies)

STUPAK, N.K.; TYAPKIN, K.F.

Using geophysical prospecting methods in searching for nickel silicate
deposits in the middle Dnieper Valley. Geofiz. razved. no.3:86-92 '61.
(MIRA 17:2)

STUPAK, N.K.

Analytical method for distinguishing anomalies. Geofiz.gbor. no.2:41-45
'62. (MIRA 16:3)

1. Dnepropetrovskiy gornyy institut imeni Artema.
(Gravity anomalies) (Magnetic anomalies)

STUPAK, N.K.; GOLISDRA, G.Ya.

Reducing two-dimensional magnetic and gravity anomalies to one
level. Razved.i prom.goefiz. no.44:102-110 '62. (MIRA 15:7)
(Gravity prospecting) (Magnetic prospecting)

STUPAK, H.K.

Correlation dependence between the density and the velocity of the propagation of ultrasonic waves in rocks in the Kursk Magnetic Anomaly. Geofiz. sbor. no.9:83-87 '64.

(MIRA 18:6)

1. Dnepropetrovskiy gosnyy institut imeni Artema.

STUPAK, N.K.; NAUGOL'NIKOV, V.B.

Working out methods for the interpretation of magnetic
and gravity anomalies in the Voronezh Crystalline Shield.
Izv. DGI 42:99-105 '64. (MIRA 18:11)

STUPAK, N.K.

Limit depth of earthquake centers. Geofiz. i astron.
no.8:62-67 '65. (MIRA 19:1)

1. Dnepropetrovskiy gornyy institut.

ACC NR: AT7003290

(A,N)

SOURCE CODE: UR/3152/66/000/014/0058/0065

AUTHOR: Stupak, N. K.; Naugol'nikov, V. B.

ORG: None

TITLE: Replacing the variometric survey with the highly accurate gravimetric survey

SOURCE: Razvedochnaya geofizika, no. 14, 1966, 56-65

TOPIC TAGS: geologic survey, surveying instrument, gravimetric survey, gravimeter, gravimetry, mathematic model

ABSTRACT: Recent increases in the accuracy of gravimetric measurements will make it possible to replace variometers with more productive gravimeters. The relations between deposition depths of anomalous masses and separation distances between observation points at which anomalous horizontal gradients can be produced with gravimeters and which will be comparable with the measurements of gravitational variometers, are analyzed. Three expressions establishing the relationship between the locations of geological objects, the necessary observation interval, and the precision of gravimetric measurements necessary to reveal anomalous horizontal gradients, are presented. The method for determining anomalous horizontal gradients was tested on theoretical models and on materials from special, highly accurate,

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Card 2/2

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E194/E184

A High-Speed Time Converter

(L₇, L₈, D₃). Thus from the instant of application of impulse to the input L₁ the voltage on the addition element commences to change in a linear manner. An impulse, retarded by a time t relative to the impulse applied to L₁ reaches the control grid Π_{11} (L₁₁) and on valves Π_{12-14} (L₁₂₋₁₄) is converted into a narrow negative impulse of standard amplitude and duration of 0.6 μ sec and there is applied to resistance R₄₁, a linearly changing voltage, i.e. the impulse is added to a voltage the instantaneous value of which depends on the delay time of the impulse applied to L₁₁ relative to the other impulse reaching L₁₁. The impulse evolved in the addition circuit is then lengthened to some μ secs and is then applied to any convenient type of amplitude analyser. Valves Π_{18} (L₁₈) and Π_{19} (L₁₉) fulfil the function of blocking the input circuits.

There is 1 figure (on page 108)

ASSOCIATION: Fiziko-tekhnicheskii institut AN USSR
(Physico-technical Institute, AS Ukr.SSR)

SUBMITTED: January 13, 1960

Card 2/2

CH

STUPAK, V. G.

21104
S/089/61/011/006/001/014
B102/B:38

24.6716
AUTHORS:

Berezin, A. K., Faynberg, Ya. B., Berezina, G. P.,
Bolotin, L. I., Stupak, V. G.

TITLE: Interaction of strong electron beams with plasma

PERIODICAL: Atomnaya energiya, v. 11, no. 6, 1961, 493 - 497

TEXT: The energy losses of a nonmodulated electron beam passing through an air plasma were determined. Beam voltage was 26 kev, amperage 8 a, electron density $(7-9) \cdot 10^{10} \text{cm}^{-3}$, and pressure in the discharge tube $3 \cdot 10^{-4} - 4 \cdot 10^{-3} \text{mm Hg}$. The quartz plasma tube, 64 cm in length, was arranged so that the greater part of the plasma was outside the focusing magnetic field (2000 oe). The electron gun, a LaB₆ disk 10 mm in diameter, was perpendicular to the magnetic field and was with voltage pulses of up to 30 kev, a width of 3.5 μsec , and repetition frequency of 50 cycles. This gun was able to produce current pulses of 9 a at the plasma chamber input, where the focusing field was 1200 oe. In the field-free region amperage decreased with increasing flight path down to 2 - 3 a due to Coulomb

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B102/B138

Interaction of strong...

interaction. The plasma density was measured by a cylindrical cavity excited with a TM_{030} wave from a klystron. The upper limit of measurement was $4 \cdot 10^{10} \text{ cm}^{-3}$. Its value during the passage of current was determined from the plasma decay law: $n = n_0 \exp(-t/\tau)$, where τ is the mean time for plasma decay and n_0 the density at $t=0$. The straight line $n(t)$ was drawn from three measurements and extrapolated toward $t=0$. Maximum electron density was $7 \cdot 10^{10} \text{ cm}^{-3}$, while the value $9 \cdot 10^{10} \text{ cm}^{-3}$ resulted from hf-interferometric measurements. The electron energy spectrum was recorded by means of a beam catcher connected to an oscillograph. These spectra were investigated at the input and output of the plasma tube, and for pressures of $4 \cdot 10^{-3}$ and $3 \cdot 10^{-4}$ mm Hg, for which losses reached 11% and 1% of the initial energy, respectively. Conclusions: Energy losses increase with plasma density and with current, and are proportional to the electron mean free path in the plasma. Calculation of losses due to elastic collisions between electrons and gas molecules yields $\approx 0.04 \text{ ev}$, and $\approx 3 \text{ ev}$ for those due to inelastic collisions. Coherent interaction, however, causes losses of 3.2 kev if self-modulation of the beam is assumed to reach X

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Interaction of strong...

21101
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B102/B138

40%. This is in good agreement with experiments. There are 6 figures and 13 references: 10 Soviet and 3 non-Soviet. The four references to English-language publications read as follows: D. Bohm, E. Gross, Phys. Rev., 72, 1851, 1864 (1949); D. Bohm, E. Gross, Phys. Rev., 72, 992 (1950); V. I. Veksler, Proc. Symp. CERN, 1, 80 (1956); M. Biondi, S. Brown, Phys. Rev., 72, 1700 (1949).

SUBMITTED: June 17, 1961

Care 3/3

X

23733
S/057/61/031/006/017/019
B116/B201

9.3130

AUTHORS: Berezin, A. K., Stupak, V. G., Bolotin, L. I., Berezhina, G.P.,
Lyapkalo, Yu. M., Sevryukov, Yu. N.

TITLE: Passage of intense pulsed electron beams through dielectric
tubes

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 6, 1961, 751 - 753

TEXT: The passage of an electron beam through metal tubes had been studied in theoretical and experimental papers by E. G. Linder and K. J. Herngvist (Ref. 1: Journ. of Appl. Phys., 21, 1088, 1950), by H. F. Ivey (Ref. 2: Advances in Electronics and Electron Physics, 6, 137, 1954), and by M. D. Gabovich (Ref. 3: UFN, 56, 215, 1955). On the passage of a beam through a tube, the residual gas is ionized, and positive ions as well as slow (secondary) electrons appear in the tube. In the case of a metal tube, these secondary electrons reach the wall, and do not participate in the further processes related to the passage of the electron beam through the tube. If the dielectric tube is "overneutralized", the secondary electrons will first reach the wall, and, after a certain time (of the order of magni-

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S/057/61/031/006/017/019
B116/B201

Passage of intense pulsed...

tude of the time required for complete neutralization of the beam), they will return to the electron-beam axis. Both the radial and the longitudinal component of the electric field are modified by this process. This, however, has an effect upon conditions on the passage of the beam through the tube, particularly upon the energy of secondary electrons. An experimental study has now been made of the passage of a pulsed electron beam through a dielectric tube. The experiment has been conducted in the following manner: A square voltage pulse having an amplitude up to 50 kv, a duration of $4.4\mu\text{sec}$ (Fig. 1a), and a frequency of 50 pulses/second was applied to the electron gun placed in a vacuum chamber at a pressure of $2 \cdot 10^{-6}$ mm Hg. The gun permitted obtaining an electron beam with an amperage of up to 1 a in the pulse. The electron beam was injected into a quartz tube with an internal diameter of 9 mm and a length of 120 mm. On the other side of the tube, the vacuum chamber was connected with a device, by which the pressure in the chamber was varied from $2 \cdot 10^{-4}$ to 10^{-2} mm Hg. Part of the beam reached the electrostatic analyzer, by which the energy spectrum of the electrons in the beam was determined. A 30-mm wide metal ring, used for measuring the radial

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B116/B201

Passage of intense pulsed...

current I_p was mounted on the quartz tube. The signal reaching the ring was differentiated by an RC circuit and fed to the oscilloscope. One of the oscillograms is shown in Fig. 1b. The negative half-wave on the oscillogram corresponds to the motion of secondary ions toward the wall and to the capture of ions near the electron-beam axis. If "overneutralization" takes place in the beam, the electric field will change its sign, and the ions, due to diffusion and other factors, will start moving toward the wall, while the secondary electrons migrate to the beam axis. The positive half-wave on the oscillogram corresponds to this condition. The energy spectrum of electrons passing through the quartz tube, measured with the electrostatic analyzer, permits distinguishing two separate electron groups, i.e., a group of fast electrons and a group of slow electrons. If, under the same conditions, the electron beam is allowed to pass through a metal tube, the spectrum will, as usual, consist of fast electrons only. Experiments have been conducted to determine the moment at which slow electrons of a given energy appear in the beam. The time was calculated from the beginning of the voltage pulse at the electron gun onward. The moment at which slow electrons appear at the analyzer output as a function of their energy is presented in Fig. 1c. As may be seen from Figs. 1b and 1c, slow electrons do not appear in the energy

X

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B116/B201

Passage of intense pulsed...

spectrum until the radial field has changed its sign, i.e., not until the electrons start moving from the tube wall toward the beam axis. The results presented in Figs. 1a, 1b, 1c have been obtained under the following conditions: voltage of the beam, 35 kv; beam current, 0.4 a; pressure in the chamber, $3.6 \cdot 10^{-4}$ mm Hg. It is finally pointed out that in the course of experiments described here also the energy spectrum of slow electrons as a function of pressure, intensity, and velocity of the primary electron beam has been determined experimentally (no details, however, are given).
[Abstracter's note: Essentially complete translation.] There are 2 figures and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR Khar'kov (Institute of Physics and Technology, AS UkrSSR, Khar'kov)

SUBMITTED: December 30, 1960

Card 4/5

S/057/62/032/005/013/022
B104/B102

24.2.120
93130
AUTHORS:

Berezin, A. K., Stupak, V. G., Bolotin, L. I., and
Berezina, G.P.

TITLE:

The passage of intense pulsed electron beams through
dielectric pipes. I

PERIODICAL:

Zhurnal tekhnicheskoy fiziki, v. 32, no. 5, 1962, 593-599

TEXT: The cathode of the electron gun was a tungsten spiral 16 mm in diameter. The pressure in the vacuum chamber was $3 \cdot 10^{-6}$ mm Hg. It was possible to produce 50 kev electron pulses with a current density of up to 1 a/cm^2 , duration of the pulses reaching 4.6 μsec . The dielectric tube (quartz, glass) had an inner diameter of 8-10 mm and the pressure inside it could be varied between $2 \cdot 10^{-4}$ and $5 \cdot 10^{-2}$ mm Hg. The electron density of a pulse was measured by an shf method while the size and the shape of the electron pulses were oscillographed. An intense electron pulse broadens on account of the space charge. At the same time the electron pulse ionizes the residual gas creating positive ions and secondary electrons. The

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RELEASE: 08/26/2000

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B104/B102

The passage of intense pulsed...

electrons travel towards the wall and the ions collect about the axis of the tube. With progressive formation of ions the electron beam is focused and after time $t \sim \tau$ the current attains a maximum value at the exit of the tube. As the electron beam contracts towards the axis of the tube so does the region of ion formation. When the intensity of the beam becomes sufficiently large, the number of electrons produced exceeds that lost by diffusion towards the wall, recombination, etc. Then reneutralization starts, and the radial electric field changes signs. The electrons travel towards the axis of the tube and the space charge is formed at the center and the current through the tube begins to decrease. At a pressure of $3 \cdot 6 \cdot 10^{-4}$ mm Hg the current strength of a pulse decreases by about 20 % during the duration of the pulse; at a pressure of $8 \cdot 10^{-4}$ mm Hg the decrease is 80 %. The current pulse passing through a dielectric tube is 4-5 times larger than that through a copper one. With the help of the focusing properties of a dielectric tube described here electron beams may be "canalized" over large distances. There are 7 figures.

Card 2/3

9.3130

24 6716

24.2120

AUTHORS:

Berezin, A. K., Stupak, V. G., Bolotin, L. I., and
Berezina, G. P.

35267
S/057/62/032/005/014/022
B104/B102

TITLE:

The passage of intense pulsed electron beams through
dielectric tubes. II

PERIODICAL:

Zhurnal tekhnicheskoy fiziki, v. 32, no. 5, 1962, 600-605

TEXT: The energy spectrum of 35 kev electrons in quartz and glass tubes of diameter 9 mm and length 60 mm was oscillographed with the help of an electrostatic analyzer (angle of aperture 2°). A group of slow and another of fast electrons (35 kev) were observed. A study was made of the behavior of these groups in their dependence on the beam energy, the current strength, the pressure of the residual gas, and other factors. The following conclusion is drawn from these observations: When the pressure in the tube is above a critical pressure, ions and slow secondary electrons are generated by the electron beam in the tube. The ions are trapped near the axis and the electrons travel to the wall. At a certain instant reneutralization starts. The electron beam contracts and a radial and

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The passage of intense...

longitudinal "sagging" of the potential occurs. At the same time the secondary electrons return to the axis of the tube. On account of the "sagging" of the potential these electrons are accelerated in the direction of the analyzer and also in the direction of the anode. The energy of the slow electrons is determined by the amount of longitudinal sagging. The energy is proportional to the current strength and the velocity of the electron beam. The longitudinal sagging is perhaps largest at the instant when the current density attains its maximum value, and probably at this same instant the accelerated electrons have their maximum energy. With increasing contraction of secondary electrons at the axis there occurs a new density distribution. The beam of the secondary electrons begins to broaden, and the sagging decreases. The density and the sagging change more rapidly with increasing pressure. K. D. Sinel'nikov and Ya. B. Faynberg are thanked for discussions and advice. There are 9 figures.

ASSOCIATION: Fiziko-tekhnicheskii institut AN USSR Khar'kov (Physico-technical Institute AS UkrSSR, Khar'kov)

SUBMITTED: June 17, 1961

Card 2/2

870

STUPAKOV, A.

Subsidiary plants and the financial condition of main enterprises.
Fin.SSSR 38 no.2:66-69 F '64. (MIRA 17:2)

1. Nachal'nik finansovogo otdela Barnaul'skogo kotel'nogo zavoda..

STUPAKOV, G. I.

"Fine-Grained Sands of Central Asia as Fillers for Mortars." Cand Tech Sci
(affiliation not given), Tashkent, 1954 (RZhKhim, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational
Institutions (13)

SO: Sum. No. 598, 29 Jul 55

GRAZHDANKINA, N.S., kand.tekhn.nauk; STUPAKOV, G.I., kand.tekhn.nauk

Using fine sands from desert regions of Central Asia in making
mortars and concretes. *Biul.stroi.tekh.* 12 no.9:10-11 S '55.
(MIRA 12:1)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut irrigatsii.
(Soviet Central Asia--Sand) (Concrete) (Mortar)

STUPAKOV, G.I.

Quality requirements to fine-grained sands used as aggregates for
cement mortars and concretes. Izv. AN Uz. SSR. Ser. tekhn. nauk no. 1:
81-86 '58. (MIEA 11:6)

1. Institut sooruzheniy AN UzSSR.
(Sand) (Cement) (Concrete)

S/081/62/000/013/033/054
B177/B101

AUTHORS: Stupakov, G. I., Dikarkina, N. Ye.

TITLE: The effect of clay filler on the strength of concrete

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 432, abstract
13K384 (Sb. nauchn. tr. N.-i. in-t po str-vu v g. Tashkente.
Akad. str-va i arkhitekt. SSSR, no. I, 1961, 77-81)

TEXT: This investigation extended over three experimental batches of clay filler: one in rolled form with a porous structure, volume weight 453 kg/m^3 and volume of intergranular space 49.72 %; and two, in slab form with a crackled structure, volume weight 451 and 485 kg/m^3 , volume of intergranular space 54.98 and 53.74 %. The water-absorption of clay filler was found to depend on the form, structure and porosity of its grains. Tests comparing clay filler in the dry and water-saturated state showed the dry filler to be 18-24 % stronger. The water-holding ability of the clay filler rises with increasing water absorption and water-cement ratio in the cement mix. Water-holding proceeds until the cement sets and begins to give up water to the hardening concrete. Thus the clay filler acts as an

Card 1/2

STUPAKOV, G. I.; DIKARKINA, N. Ye.

The effect of keramzit on the strength of concrete. Sbor.
nauch. trud. NII po stroi. ASIA no.1:77-81 '61.
(MIRA 16:1)

(Keramzit) (Concrete—Testing)

STUPAKOV, G. I.

Experimental method of choosing the composition of concrete.

Sbor. nauch. trud. NII po stroi. ASiA no.2:76-90 '61.

(MIRA 16:1)

(Concrete)

KIREYEVA, G.D.; STUPAKOV, V.P.

Occurrences and deposition conditions of lower Permian
sediments in the northeastern Donets Basin. Geol.nefti i
gaza 3 no.12:19-22 D '59. (MIRA 13:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gazovoy
promyshlennosti (VNIIGaz).
(Donets Basin—Geology, Stratigraphic)

STUPAKOV, V.P., kand.sel'skokhozyaystvennykh nauk

Chemical weed control. Zashch.rast.ot vred.i bol. 4 no.3:39-40
My-Je '59. (MIRA 13:4)

1. Sel'skokhozyaystvennyy institut, L'vov.
(Herbicides)

TIKHENKO, L., agronom; STUPAKOV, V., dots.

Raise stubble crops! Nauka i pered. op v sel'khoz. 9 no.6:19-20
Je '59. (MIRA 12:9)

1.L'vovskiy sel'skokhozyaystvennyy institut (for Stupakov).
(Field crops)

STUPAKOV, V.P., kand.sel'skokhoz.nauk

Chemical weed control. Visnyk sil'hosp.nauky 4 no.8:41-45 Ag '61.
(MIRA 14:7)

1. L'vovskiy sel'skokhozyaystvennyy institut.
(Weed control) (Herbicides)

STUPAKOV, V.P.

Tectonics of the northern margins of the Dnieper-Donets Lowland
and adjacent regions. Trudy VNIIGAZ no.14:68-88 '62. (MIRA 15:5)
(Dnieper-Donets Lowland—Geology, Structural)

STUPAKOV, V.P.

Origin of the crumpled formation of the Kamensk region in the
northern Donets Basin. Trudy VNIIGAZ no.14:195-200 '62. (MIRA 15:5)
(Donets Basin--Geology, Structural)

ORLOV, Yevgeniy Sergeyevich; STUPAKOVA, L.A., red.; KHLOPOVA, L.K.,
tekhn. red.

[Maneuvering of vessels during mooring; texts on various ship
handling subjects for correspondence students in navigation schools]
Manevrirovaniye sudov pri shvartovke; lektsii dlia studentov-zaochni-
kov sudovoditel'skoi spetsial'nosti morekhodnykh uchilishch. Moskva,
Izd-vo "Morskoi transport," 1961. 56 p. (MIRA 14;12)
(Anchorage) (Ship handling)

LETUNOV, Viktor Sergeyovich; STUPAKOVA, L.A., red.; USANOVA, N.B.,
tekhn. red.

[Vessels on an air cushion] Suda na vozdukhnoi podushke. Mo-
skva, Izd-vo "Morskoi transport," 1963. 47 p. (MIRA 16:4)
(Ground effect machines)

LUGOVSKIY, Vitaliy Vasil'yevich; STUPAKOVA, L.A., red.; TIKHONOVA, Y
Ye.A., tekhn. red.

[Standards of the stability of merchant ships in various
countries] O normirovani ostoiichivosti grazhdanskikh mor-
skikh sudov v raznykh stranakh. Moskva, Izd-vo "Morskoj tran-
sport," 1963. 180 p. (MIRA 16:7)
(Stability of ships—Standards)

KRAVCHUK, Ivan Ivarovich; MOROKHIN, Boris Grigor'yevich. Prinimali
uchastiye: VOLKOV, B.V.; AKIT, R.P.; STUPAKOVA, L.A., red.;
TIKHONOVA, Ye.A., tekhn. red.

[Teaching ship care to first-class seamen] Proizvodstvennoe
obuchenie matrosov I-go klassa. Izd.2., dop. i perer. Mo-
skva, "Morskoï transport," 1963. 215 p. (MIRA 16:11)
(Seamanship)

ZUBKOV, Aleksandr Yemel'yanovich; STUPAKOVA, L.A., red.

[Weather forecasting on the sea by local indications]
Predskazanie pogody na more po mestnym priznakam. Izd.2.,
perer. i dop. Moskva, Izd-vo "Transport," 1964. 141 p.
(MIRA 17:7)

BELOBROV, Andrey Pavlovich. Prinimali uchastiye: BASKIN, A.S.,
inzh.-gidrograf; BOGDANOV, I.A., inzh.-gidrograf, dots.;
VIL'NER, B.A., inzh.-gidrograf; VOLKOV, P.D., inzh.-
gidrograf; GORSHKOV, N.M., inzh.-gidrograf; CHUROV, Ye.P.,
inzh.-gidrograf; YASHKEVICH, Ye.V., inzh.-gidrograf;
STUPAKOVA, L.A., red.

[Marine hydrography] Gidrografiia morn. Moskva, Trans-
port, 1964. 514 p. (MIRA 17:9)

SALTOVSKAYA, Valentina Nikolayevna; STUPAKOVA, L.A., red.

[Stability of ships on stern seas] Ostoichivost' sudov
na poputrom volnenii. Moskva, Transport, 1964. 95 p.
(MIRA 17:10)

AKSYUTIN, Leonid Radionovich, inzh.-sudovoditel'; BOL'SHAKOV,
Vladimir Sergeyevich, kand. geogr. nauk; STUPAKOVA,
L.A., red., red.

[Hydrometeorological service on maritime vessels] Gidro-
meteorologicheskaya sluzhba na morskikh sudakh. Moskva,
Transport, 1964. 82 p. (MIRA 18:7)

MIKHEYEV, Anatoliy Gavrilovich; STUPAKOVA, L.A., red.

[Towing practices in harbors] Praktika portovykh buksirovok. Moskva, Transport, 1965. 72 p. (MIRA 18:9)

BOGOMOLOV, A.I.; UDALOV, V.I.; SEMENEGOLIN, V.I.; STEPANOVA, L.A.,
ed.

[Maneuvering devices of seagoing vessels] sredstva manevri-
rovaniia morskikh sudov. Moskva, Transport, 1965. 100 p.
(MIRA 18:9)

OBRAZUMOV, P.A.; STUPAKOVA, L.A., red.

[Memorandum book of a ship's radio operator] Pamiatnaia
knizhka sudovogo radista. Moskva, Transport, 1965. 157 p.
(MIRA 18:7)

SHUL'GINA, V.P., kand.tekhn.nauk; STUPAKOVA, L.P.; MOTYLEV, Yu.L.,
kand.tekhn.nauk

Laying roadbeds of gypsumed soils. Avt.dor. 25 no.4:14 Ap '62.
(MIRA 15:5)

(Road construction)

STUPAKOVA, L.F., inzh.; POPOVA, R.A.

Earth roadbed made of excessively saline soils. Avt. dor. 28
no.2:16-17 F '65. (MIRA 18:6)

MOTYLEV, Yu.L., kand. tekhn.nauk; BUTLITSKIY, Yu.V., mlad. nauchn. sotr.; STUPAKOVA, L.F., ml. nauchn. sotr.; FEDOSEYEVA, T.I., ml. nauchn. sotr.; SHUL'GINA, V.P., kand. tekhn.nauk; IVANOV, N.N., prof., doktor tekhn. nauk, retsenzent; BEZRUK, V.M., doktor geol.-miner. nauk, retsenzent; KOVRIZHNYKH, L.P., red.; BODANOVA, A.P., tekhn. red.

[Investigating the stability of a saline-soil roadbed] Issledovaniia ustoichivosti zemlianogo polotna iz zasolennykh gruntov. Moskva, Avtotransizdat, 1963. 115 p.

(MIRA 16:8)

(Road construction) (Soil mechanics)

STUPAKOVA, T. F., and ZATSEPIN, N. I.

"Etiological Role of Serological Coli Types O 111, 055, and 026 in Dispepsia." Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Interinstitute Scientific Conference on Problems of Dysentery [The following are identifications of personnel associated with the Institute of Epidemiology and Microbiology, imeni N. F. Gamaleya who attended the conference held in Molotov, 4-7 April 1956] Inst. Epidem and Microbiol im. Gamaleya AMS USSR

SO:Sum 1186, /11 Jan 57.

USSR/Microbiology. Microbes Pathogenic for Man and
Animals

F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57656

Author : Zatsenina N. I., Stupakova T. E.

Inst : Not given

Title : Etiological Role of Some Serological Types of
the Coli Bacillus

Orig Pub : Zh. mikrobiol., epidemiol i immunobiologii,
1957, No 5, 44-49

Abstract : Bacteriological examinations of the feces of
112 children with acute intestinal diseases were
conducted (methods given). In cases in which
strains of the O groups of 111, 26, and 55 were
isolated, the examinations were repeated twice
a week. Dysentery bacilli were isolated from
38 (52.5%) of the patients whose diseases were

Card 1/3

USSR/Microbiology. Microbes Pathogenic for Man and
Animals

F

APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653710004-4"

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57656

Abstract : diagnosed as dysentery. Pathogenic strains of
the coli bacillus were isolated from 9 of the
34 children in whom a diagnosis of dysentery
was not bacteriologically confirmed. Coli ba-
cilli of the types 0111, 026, and 055 were
isolated from 15 of the 40 children whose di-
seases were diagnosed as those of dyspeptic na-
ture. Serious diseases accompanied by toxicosis
were noted 3 times oftener in cases from which
0111 was isolated than in those from which the
other O groups were isolated. Pathogenic coli
bacilli were isolated from 10 of the 128 child-
ren who were attending nurseries. The great re-
sistance of the pathogenic coli bacilli was no-
ted: in wards where patients excreting these
bacilli are kept, a corresponding serological

Card 2/3

STUPALOV, Yu., ^D_A kand. ekon. nauk

Cash payment on collective farms of the Kuban. Nauka i pered.
op. v sel'khoz. 8 no.9:5-6 S '58. (MIRA 11:10)
(Kuban--Collective farms) (Wages)

STUPALOV, Yuriy Dmitriyevich, kand. ekonom. nauk; GLAZUNOVA, N.I.,
red.; SAVCHENKO, Ye.V., tekhn. red.

[Specialization and the combining of specialties on collective and state farms] Spetsializatsiia i sochetanie ot-raslei v kolkhozakh i sovkhozakh. Moskva, Izd-vo "Znanie," 1962. 30 p. (Narodnyi universitet kul'tury: Sel'skokho-ziaistvennyi fakul'tet, no.17) (MIRA 15:2)
(Farm management)

MAMONTOV, I.M.; KONDAKOV, N.I.; ARKHIPOV, G.Ye.; SERGEYEV, A.S.,
kand. sel'khoz. nauk; PETROV, Ya.P.; GUR'YEV, D.G.;
STIPALOV, Yu.G.; FIL'CHENKO, R.D., red.; PETROV, G.P.,
tekhn. red.

[Measures for protecting farm plants, fruit and berry
plantations, and forests against pests and diseases in the
Chuvash A.S.S.R. in 1962] Meropriiatiia po zashchite sel'sko-
khoziaistvennykh rastenii, plodovo-iagodnykh nasazhdenii i
lesov ot vreditel'ei i boleznei po Chuvashskoi ASSR na 1962.
74 p. (MIRA 16:4)

1. Chuvash A.S.S.R. Ministerstvo proizvodstva i zagotovok
sel'skokhozyaystvennykh produktov. Respublikanskaya stantsiya
po zashchite rastenii.

(Chuvashia—Plants, Protection of)

STUPAK, JELENA, L.

Chemical Abst.

Vol. 43

Apr. 10, 1954

Mineralogical and Geological Chemistry

Nickelian-magnesian calcite and aragonite from Rujevac, Ba Village, western Serbia. Zoran J. Maksimović and Jelena Stupak. *Srpska Akad. Nauk (Belgrade, Zbornik radova)* No. 5, 115-117 (1953) (French summary). Cf. C.A. 47, 6314a. — A cavity in limonitic material impregnated with garnierite contained cryptocryst. white magnesian calcite (I) on which were concentric bands of yellowish greenish yellow nickelian calcite (II), and on this material of aragonite (III). Analyses of I: samples of II: 1. 44.22, 44.10, 44.13, 43.81; insol. 0.22, 0.08, 0.13, 0.12; sum 99.91, 100.16, 100.08, 100.88, 100.11%; sp. gr. 2.675, 2.722, 2.726, 2.728, 2.338. The wt. at 20° of the sample with 0.65% NiO were: 1.48046, & 1.85838. The formation of this nickelian carbonate shows that Ni is dissolved from altered serpentinites by carbonate waters.

ML
4-9-55

1ST AND 2ND CIPHERS																									
PROCESSED AND RECEIVED BY																									
<p>An investigation of the 100-ton stationary open-hearth furnace. N. I. Stupar, S. L. Levin and N. A. Serebritskii. <i>Dokl. Akad. Nauk SSSR</i>, No. 10, 14-33, No. 11-12, 32-40.—A description is given of the structural details, operation, material and heat balance of the No. 10 100-ton open-hearth furnace at the Petropavlovsk plant. S. L. M.</p>																									
<p>ASH 31.4 METALLURGICAL LITERATURE CLASSIFICATION</p>																									

1ST AND 2ND COLUMNS		3RD AND 4TH COLUMNS	
PROCESSES AND PROPERTIES INDEX			
<p>5</p> <p>7</p> <p>Influence of the Composition of Bessemer Iron on the Quality of Rail Steel. M. Kravets and N. Stupar. (Stal, 1940, No. 8, pp. 15-17). (In Russian). High manganese contents (above 0.9%) in the iron were found to have a detrimental effect on the quality of the Bessemer steel rails produced from the iron: it increased the proportion of rejects due to tears and skin defects. This influence of manganese is ascribed to certain effects it has on the behaviour of the iron in the converter. This, and possibly also the increased absorption of nitrogen, also explain why manganese increases the brittleness of the steel. High manganese contents are particularly undesirable when associated with high silicon contents. The optimum manganese content of the iron is 0.50-0.70%. The influence of silicon in increasing the brittleness of the steel was not definitely confirmed.</p>			
ASH-LEA METALLURGICAL LITERATURE CLASSIFICATION			
SUBJECT		CLASSIFICATION	
<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>		<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>	

Yu. V. GUDIN, L. N. ILIUSHEVICH, A. N. KOSTINOV, I. I. STUJAN,
R. A. SLOBODIN, V. P. SUBILEV, N. A. TOLKOV:

In a Russian Symposium of Papers entitled "Heat Treatment
of Rails", edited by I. P. Bardin and published by the
Soviet Academy of Science, Moscow 1950. The following
articles appeared; Methods of prevention of flake formation.

SC: 886103

STUPAR, N. I.

Dephosphorization of Bessemer steel. N. I. Stupar, M. O. Vengimovich, S. E. Sologub, A. D. Kutsenko, and M. P. Kuznetsov. Nauch. Trudy Dnepropetrovsk. Met. Inst. 1953, No. 30, 26-47; Referat. Zhur., Met. 1955, Abstr. No. 8590. --Dephosphorization was effected by charging the stream of metals during pouring into the ladle with CaO 60, Fe_2O_3 30, fluorspar 15, and Na_2CO_3 5%. The materials were added: (a) in particle size 0.1-0.2 mm. and permixed, or (b) in particle size 1-5 mm. and separately in the order Fe_2O_3 , fluorspar, Na_2CO_3 , and CaO . The total dephosphorizing charge was 2-3% by wt. of the metal. Method (a) removed 52% of the P, method (b) 46%. During dephosphorization the Si content of the metal should not exceed 0.05%, and the acid slag should not be allowed to drop into the ladle. Addn. of a self-heating mixt. of the thermite type lowers the degree of dephosphorization slightly. Dephosphorization with lime in a converter with a chromomagnesite lining at the period of blowing of Bessemer pig iron is possible. Dephosphorizing powders do not contaminate metal with nonmetallic inclusions. A. N. P.

11
4E20
1-100
4E20

111

LAPITSKIY, V.I., doktor tekhn. nauk, prof.; MARINOV, A.I., inzh.; OYKS, G.N.,
doktor tekhn. nauk, prof.; OLEKSENKO, V.V., inzh.; ORLOV, V.I.,
kand. tekhn. nauk; HUDICHEV, K.P., inzh.; STUPAR', N.I., kand.
tekhn. nauk, dots.

Reducing the inhomogeneity of large rimming steel ingots (up to
18 t.). Izv. vys. ucheb. zav.; chern. met. no.2:19-33 P '58.

(MIRA 11:5)

1. Dnepropetrovskiy metallurgicheskiy institut, Moskovskiy institut
stali i zavod "Zaporozhstal'."

(Steel ingots)

LAPITSKIY, V.I., doktor tekhn.nauk, prof.; STUPAR', N.I., dotsent;
STUPEL', S.I., inzh.; TARAPAY, M.A., inzh.; TIMOFEYEV, V.L., inzh.;
YAKOVLEV, Yu.N., inzh.

Certain problems in the preparation of steel ingots for wheels.
Izv. vys. ucheb. zav.; chern.met. no.5:21-28 My '58. (MIRA 11:7)

1.Dnepropetrovskiy metallurgicheskiy institut i zavod im. K.
Libknekhta.

(Steel ingots)

PHASE I BOOK INTRODUCTION 809/1534

Sovetskoye po teorii litseyniy protsessov, 4th
Kristallizatsiya metallor; teoriya i praktika (Crystallization of Metals;
Theory and Practice) [The book contains the proceedings of the Fourth Conference on the Theory of Casting Processes]
Transactions of the Fourth Conference on the Theory of Casting Processes
Moscow, Izdatel'stvo AN SSSR, 1970. 25 p. 3,20 copies printed.
Sponsoring Agency: Akademiya Nauk SSSR. Institut mashinovedeniya. Komissiya po
voprosam moshinostroyeniya.
Resp. M. I. B. Oulyayev, Doctor of Technical Sciences, Professor; Ed. of
Publishing House: V. S. Khramov; Tech. Ed.: S. G. Tikhomirov.
PURPOSE: This book is intended for metallurgists and scientific workers. It
may also be useful to technical personnel at foundries.
COVERAGE: The book contains the proceedings of the Fourth Conference (1968) on
the Theory of Casting Processes. [The previous 3 conferences dealt with
hydrodynamics of molten metals (1955), solidification of metals (1956), and
shrinkage processes in castings (1957)]. Technical problems in the crystal-
lization of metals, including the crystallization of constructional steels,
alloy steels with special properties, cast iron, and of nonferrous alloys, are
discussed. Emphasis is given to D. L. Chernov and S. T. Oshakov and their
students, S. B. Zhurav and A. O. Spassky, for their contributions to the
understanding of the basic problems involved in the theory of crystallization
of ferrous and nonferrous metals and alloys. Academician A. V. Shubnikov is
also mentioned in connection with his work on the problem of research on
crystal formation. References accompany several of the articles.

Magatitskiy, O. M., A. A. Dzhigov, and B. B. Oulyayev. Influence of Alloy Composition on Conditions of the Primary Crystallization of Cast-Iron	29
Krasovskiy, B. S., E. P. Rukhovich, and Ye. Z. Spasskiy. Investigation of the Crystallization of Iron and Its Alloys	57
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Gali, I. V. Crystallization of Binary Alloys Subjected to Deep Refrigeration	69
Oshakov, D. Ye. Influence of Insoluble Additives on the Crystallization and Structure of Metals	76
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Reymart, V. Ye. Dependence of the Dendritic Structure and Properties of Cast Steel on the Microstructure	121
Gulin, B. S., A. A. Kozlov, and B. B. Oulyayev. Investigation of the Mechanical Properties of Steel at Temperatures Close to the Crystallization Point	128
Prokhorov, A. P. Crystallization of a Continuous Ingot and the Influence of Hot-Steel Properties on it	134
Reymart, V. E., and B. P. Polyak. Cooling Regime Securing Minimal Thermal Stresses in the Cast of a Flat Ingot in Continuous Casting	139
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LAPITSKIY, Vladimir Iosifovich, prof., doktor tekhn.nauk; STUPAR¹,
Nikolay Ivanovich; LEGKOSTUP, Olimpiada Ivanovna;
POZDNYAKOVA, G.L., red. izd-va; KARASEV, A.I., tekhn.red.

[Metallurgy of steel] Metallurgiya stali; obshchi kurs.
Pod red. V.I.Lapitskogo. Moskva, Metallurgizdat, 1963. 327 p.
(MIRA 16:7)

(Steel--Metallurgy)

LAPITSKIY, V.I.; STUPAR', N.I.; RUDICHEV, K.P.; OLEKSENKO, V.V.;
YAITSKIY, A.K.

Pouring rimmed steel into bottle shaped ingot molds. Izv. vys.
ucheb. zav.; chern. met. 6 no.11:65-69 '63. (MIRA 17:3)

1. Dnepropetrovskiy metallurgicheskiy institut.

KIRSANOV, V. M.; KONOVALOV, V. S.; KLIPA, V. M.; STUPAR', N. I.

Various methods of heating ingot heads and their effect on
the quality of killed steel. Izv. vys. ucheb. zav.; chern. met.
7 no. 4:56-61 '64. (MIRA 17:5)

1. Dnepropetrovskiy metallurgicheskiy institut.

OKHOTSAYE N.I.

production is made steel by the oxygen-blown converter method.
Izv.vys.u-geb,222.; zhurn.ket. 8 no.6:64-67 '65.

(MIRA 18:8)

1. Enpropetovakly nablurgicheskly institut.

VASILIC, Momcilo, Dr., hem.; STUPAR, Petar, i dipl. phara.;
MILENKOVIC, Dusan

Parathion poisonings. Med. glas. 10 no.1;40-45 Jan 56.

1. Institut za sudsku medicinu Medicinskog fakulteta u Beogradu
(upravnik prof. dr. J. Bogicevic) Toksikoloski osek Instituta
za sudsku medicinu u Beogradu (sef ing. hem. B. Hristic).
(PARATHION, pois. (Ser))
(POISONING,
parathion. (Ser))

STUPAR, P. B.

SURNAME (in caps); Given Names

Country: Yugoslavia

Academic Degrees: not given

Affiliation: Institute for Forensic Medicine, Department of Toxicology
of the Medical Faculty (Institu za sudsku medicinu,
Toksikoloski otsek Medicinskog Fakulteta) Belgrade

~~XXXXXX~~

Source: Belgrade, Arhiv za Farmaciju, Nr 6, 1961, pp 521-528.

Data: "Founding and Development of the Toxicological Laboratory in
Belgrade."

YUGOSLAVIA

Ljubica ^{B.}HRISTIC-SOJIC and P. STUPAR, Department of Forensic Medicine,
Faculty of Medicine (Institut za ljudsku medicinu Medicinskog fakulteta),
University of Belgrade.

4 "Case of Homicide with Parathion."

Zagreb, Arhiv za Higijenu Rada i Toksikologiju, Vol 12, No 3-4, 1961;
pp 195-198.

Abstract [English summary modified] Parathion was added to drinking water stored in the field; intended victim was over 70 years old and it is doubtful that there would have been any suspicions about his sudden death had not another neighbor drunk of the same water by chance, succumbing also in a very similar manner. This eventually led to necropsy, analysis, confession. Plea for tighter control of such pesticides and for necropsy of all persons who die without being treated by a physician, also in the rural hinterland.

1/1

HRISTIC-SOJIC, Ljubica; STUPAR, P.

A case of homicidal parathion poisoning. Arh. hig. rada 12 no.3/4:
195-198 '61.

1. Institut za sudsku medicinu Medicinskog fakulteta, Beograd.
(PARATHION) (HOMICIDE)

S

STUPAR, S. I.

Experiments on melting tool steel without the use of an oxidizing period in the process. S. I. STUPAR, *Doklady Akad. Nauk SSSR*, No. 3, 30-43. The object was to obtain a product having the composition: C 0.8, Si 0.2, Mn 0.3, W 15.30, Cr 3.5, V 1.23% and a ratio of S and P. As raw material iron scrap, hematite ore, burnt lime, fluor spar and charcoal were used, to which were added ferro-Si, ferro-Cr, ferro-W and ferro-V. One series of experiments were conducted under conditions in which the metal was allowed to react with an oxidizing slag for a certain period in the process of melting. In another series the oxidizing period was left out, the total time of melting being thus reduced 50%. Tests made on the resulting products showed that the metal prepared by the latter method did not differ materially from that prepared with an oxidizing period (for the removal of P and S). The saving in time thus effected results in a substantial economy. The chemical composition in both sets of samples was about the same, showing S from 0.014 to 0.004%, and P from 0.078 to 0.015%.

S. I. MADORSKY

STUPAR', S.I.

The problem of magnesite inserts in grog sleeves. Stal' 15
no.7:647-649 J1 '55. (MIRA 8:9)

1. DEMO.

(Magnesite) (Refractory materials)

Stupar, S.I.

STUPAR', S.I.; KANDLER, N.V.; ALBUL, T.I.

Investigation of cast steel rolls. Stal' 16 no.7:638-645
Jl '56. (MLRA 9:9)

1. Dnepropetrovskiy zavod metallurgicheskogo oborudovaniya.
(Rolls (Iron mills)--Testing)

TRUBETSKOV, K.M., kandidat tekhnicheskikh nauk; STUPAR', S.N., inzhener.

Radioactive isotopes for investigating the steel desulfuration process.
Sbor.trud.TSNIICM no.13:127-141 '56. (MLBA 9:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metal-
lurgii.

(Zaporozh'ye--Steel--Metallurgy)

(Radioisotopes--Industrial applications)

AUTHOR: Stupar', S.N. (Engineer).

133-8-7/28

TITLE: Sulphur exchange between the gas phase and the bath in a basic open hearth furnace. (Obmen seroy mezhdru gazovoy fazoy i vannoy osnovnoy martenovskoy pechi).

PERIODICAL: "Stal'" (Steel), No.8, 1957, pp.707 - 713 (USSR).

ABSTRACT: An investigation of the transfer of sulphur from the gas phase into the bath and from the bath to the gas phase was carried out on the Zaporozhstal' Works, using radioactive S_{16}^{35} , which was introduced either in the metal or in the gaseous fuel. K.M.Trubetskov, (Cand.Tech.Sc.), V.F.Surov, (Eng.), and A.G'rekov, (Eng.), participated in the investigation. The introduction of radioactive sulphur into fuel was done from its solution in turpentine by a sprayer placed in the vertical gas valve. The quantities of radioactive isotope introduced were, in metal 20 curie and in the gas 5 curie. Of 13 experiments radioactive sulphur was introduced in the metal during the refining period in 4 cases and into the gas, during various smelting periods - in 9 cases. Smelting was carried out in 185 t furnaces using the scrap-ore process with 63-68% of liquid pig. Fuel used - a mixture of coke oven and blast furnace gas without carburisation; sulphur content in coke oven gas

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133-8-7/28

Sulphur exchange between the gas phase and the bath in a basic open hearth furnace. (Cont.)

during the heating up period the use of oxygen decreases the rate of sulphur transfer from gas to metal by about 20%. The data on heats during which sulphur transfer during the refining period was investigated are given in Table 2 and Fig.1. The results obtained are given in Table 3. The velocity of sulphur transfer from gas to metal during the refining period was found to be directly related to the velocity of decarburisation, i.e. boiling intensity (Fig.2b) and can be approximately expressed by Eq.2. Since under normal refining conditions sulphur from gas should not be transferred from gas to slag, the transfer of sulphur from gas to metal takes place via metal spray caused by boiling, i.e., $\{S\} \rightarrow (S) \rightarrow [S]$. The transfer of sulphur from the bath into the gas during refining was investigated by introducing radioactive sulphur in the metal. As a standard sulphur content in the combustion gases 0.25 g/m^3 was taken and as a criterion of the amount of sulphur transferred from the liquid bath into the gas- the ratio of radioactivity of 1 m^3 of the combustion products to specific radioactivity of sulphur in slag $[i]:(i)$. This ratio changes during the course of refining (Table 4), which

Card 3/6

133-8-7/28

Sulphur exchange between the gas phase and the bath in a basic open hearth furnace. (Cont.)

the sulphur absorption during this period was 17-25% of the sulphur content in metal per hour; during the heating up period 8-11%/hr and during refining 3-7.5%/hr.) During the refining period there is a direct relationship between the rate of sulphur absorption from the gas phase and the rate of decarburisation. 2: The transfer of sulphur from the gas phase into the bath, apparently takes place mainly through droplets of metal through the slag into the gas phase during boiling. 3: It was established that in the course of refining sulphur is transferred with appreciable velocity from the bath into the gas and is removed with the combustion products. This phenomena depends on the technological conditions of smelting and plays a large part in the process of desulphurisation of metal in the basic open hearth furnace. 4: The removal of sulphur into gaseous phase substantially increases with increasing content of ferric oxide in slag and increasing oxygen potential of the atmosphere. 5: The transfer of sulphur from the liquid bath into the gas phase takes place, apparently, by oxidation of sulphur in slag by oxygen from the gas phase. Oxides of iron in slag act as a transfer link in the process of

Card 5/6

STUPAR', S.N.

Studying the passage of sulfur from the gaseous phase into the
basic open-hearth furnace bath. Probl. metalloved. i fiz. met.
no. 6:344-359 '59. (MIRA 12:8)
(Open-hearth process) (Desulfuration)

STUPARU, A.; THOMAN, V.

Reduction of operation costs and increased labor productivity in handling cement bags in the port of Constanta by using pallets. P 232.

REVISTA TRANSPORTURILOR. (Asociatia Stiintifica a Inginerilor si Technicienilor din Romania si Ministerul Transporturilor Rutiere, Navale si Aeriene) Bucuresti, Romania. Vol. 6, no. 6, June 1959.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, no. 9, Sept. 1959.

Uncl.

APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653710004-4"

RUMANIA

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